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#### NEW SPECIES OF *RALLICOLA* (Philopteridae: Mallophaga)

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Since reviewing the genus *Rallicola* (Emerson 1955), additional material has been examined. The status of two subspecies can now be clarified, and two new forms are described.

***Rallicola ortygometae californicus*** (Kellogg and Chapman)

The original description was based on material collected from *Rallus obsoletus*=*Rallus longirostris obsoletus* Ridgway, and *Rallus virginianus*=*Rallus limicola limicola* Vieillot. For my review, specimens from *Rallus limicola limicola* Vieillot were not available. From material now available, it is established that the two hosts harbor different forms of the genus *Rallicola*. I designate *Rallus longirostris obsoletus* Ridgway as the type host of *Rallicola ortygometae californicus* (Kellogg and Chapman, 1899). This host is the first one listed by the authors in their original description. The redescription and figures given in my review are based on material from *Rallus longirostris* subspecies. The specimens found on *Rallus elegans elegans* Audubon also appear to be this subspecies.

***Rallicola ortygometae guami*** Carriker

Through the courtesy of Dr. Ronald Ward, material from the type host of this species has been examined. The series consisted of: Six females and four males from *Rallus owstoni* (Rothschild), collected August 22, 1931, on Guam by W. F. Coultas. The form is properly a subspecies of *Rallicola ortygometae*. In my key, it can be separated from *Rallicola ortygometae affinis* (Piaget) by tergite III in the male; which in *guami* is continuous, and in *affinis* is interrupted. These specimens differ slightly from the description given by Carriker (1949), so the following notes prepared by Dr. Ward and the author are presented.

In the male, abdominal tergite II interrupted medianly, III interrupted medianly for about one-third of the segment length, and the remainder are entire. Male genitalia as shown in figure 1. In the female, abdominal tergites II-VI interrupted medianly, VII-VIII transversely continuous. Sternites III-VI, in both sexes, with four long setae on posterior margins.

Measurements:	Male	Female
Length of head	0.47mm	0.49mm
Width of head	.36	.38
Width of prothorax	.23	.24
Width of pterothorax	.30	.33
Width of abdomen	.33	.35
Total length	1.55	1.66

***Rallicola ortygometae subporzanae*** n. sp.

All abdominal tergites, in both sexes, transversely continuous. Abdominal tergites II-III with large anterior median indentation; but posterior one-third of these two tergites continuous. Abdominal tergites and sternites, in both sexes, each with four long setae. Male genitalia as shown in figure 2.

Measurements:	Male	Female
Length of head	0.48mm	0.44mm
Width of head	.38	.36
Width of prothorax	.22	.21
Width of pterothorax	.32	.32
Width of abdomen	.48	.21
Total length	1.43	1.51

*Type host*.—*Porzana carolina* (Linnaeus), Sora rail.

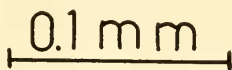
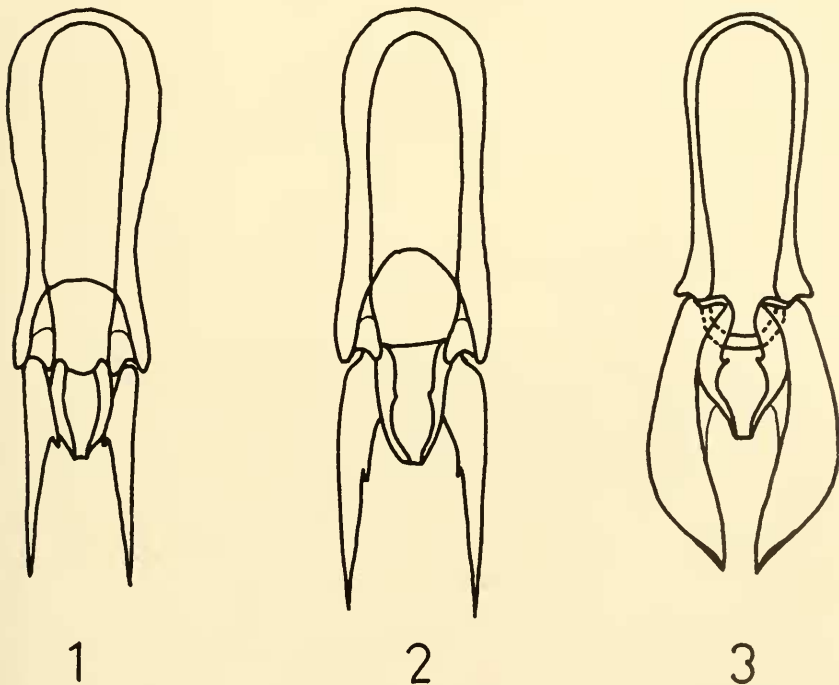
*Type material*: Holotype male, allotype female, and paratype female collected in Douglas County, Kansas, during May 1909, are in the Snow Entomological Collection, University of Kansas. Paratype female collected at Mattituck, Long Island, New York, on September 10, 1936, by R. Latham, is in the collection of Cornell University.

This subspecies is closest to *Rallicola ortygometrae ortygometrae*; but can be separated from it in that tergite IV is continuous in the new form, and interrupted medianly in *Rallicola ortygometrae ortygometrae* (Schrank).

***Rallicola mystax* (Giebel)**

The type host of this species is *Porzana porzana* (Linnaeus), which is found in Europe. Two collections have been examined that indicate

0.1 mm

Male genitalia of *Rallicola* sp., drawn to the same scale:—Fig. 1, *R. ortygometrae guami* Carriker; fig. 2, *R. ortygometrae subporzanae* n. spp.; fig. 3, *R. kelloggi* n. sp.

the species is also found on *Porzana carolina* (Linnaeus) in North America. Two males collected at Moscow, Idaho, on May 2, 1952 by T. D. Burleigh, and one male collected at Tlacotalpan, Vera Cruz, Mexico, on February 19, 1940, by M. A. Carriker, apparently agree in all details with specimens from the type host. These records tend to confuse the situation, as heretofore it has been thought that each species of host was parasitized by only one species of *Rallicola*. Further collections will be necessary to determine if this exists for other hosts.

*Rallicola kelloggi* n. sp.

Male: Head slender, with a wide hyaline margin. First segments of antennae enlarged and elongated, each with an appendage. Third segments of antennae prolonged distally beyond the junction with segment IV. Posterior margin of pterothorax with four pairs of long setae. Second abdominal tergite interrupted medianly, the remainder transversely continuous; each tergite with a pair of setae located medianly on posterior margin. Abdominal sternites III-VI with four setae on posterior margins; and sternites VII-VIII with two setae on posterior margins. Male genitalia as shown in figure 3.

Female: Antennae filiform. Abdominal tergites II-III interrupted medianly, IV indented medianly, and the remainder transversely continuous. Chaetotaxy, except for the terminal abdominal segments, as in the male. Lateral margins of abdominal sternite IX, each with a fringe of ten medium length setae.

Measurements:	Male	Female
Length of head	0.42mm	0.45mm
Width of head	.35	.36
Width of prothorax	.21	.23
Width of pterothorax	.28	.30
Width of abdomen	.38	.45
Total length	1.26	1.42

*Type host*.—*Rallus limicola limicola* Vieillot, Virginia Rail.

*Type material*.—Holotype male, paratype male, and five paratype females in the U. S. National Museum, were collected at Vienna, Maryland, March 6, 1951. Allotype female, two paratype females, and one paratype male in the collection of Ohio State University were collected at Burkey Lake, Ohio, on May, 15, 1925. Two paratype males in the collection of Dr. G. J. Spencer were collected at Haney, British Columbia, on June 14, 1951, by A. Peake. Three paratype males are in the collection of Cornell University; these specimens are without data except for the host. A paratype male and female in the U. S. National Museum were collected at Leonia, New Jersey, on September 6, 1929, by J. A. Weber.

This form is near *R. sarothurac* Clay, *R. hoogstraali* Emerson, and *R. cuspidatus* (Scopoli). The mesosome of the male genitalia is not elongated and pointed as in *R. sarothurac*, or broadly rounded as in

*R. hoogstraali*. Tergite V of the female is interrupted medianly in *R. cuspidatus*, and transversely continuous in *R. kelloggi* n. sp.

#### HOST LIST

The following list includes all species of the genus *Rallicola* found in the United States, Canada, and Alaska, together with their normal hosts.

*Rallicola advenus* (Kellogg), 1896. *Fulica americana americana* Gmelin, American coot.

*Rallicola eliotti* Emerson, 1955. *Porphyryla martinica* (Linnaeus), Purple gallinule.

*Rallicola fulicae* (Denny), 1842. *Fulica atra atra* Linnaeus, European coot.

*Rallicola funebris* (Nitzsch), 1866. *Aramus scolopaceus pictus* (Meyer), Florida limpkin.

*Rallicola kelloggi* n. sp. *Rallus limicola limicola* Vieillot, Virginia rail.

*Rallicola minutus* (Nitzsch), 1866. *Gallinula chloropus cachinnans* Bangs, Florida gallinula.

*Rallicola mystax* (Giebel), 1874. *Porzana carolina* (Linnaeus), Sora rail.

*Rallicola ortygometrae californicus* (Kellogg and Chapman), 1899. *Rallus longirostris* subspecies, Clapper rails, and *Rallus elegans elegans* Audubon, King rail.

*Rallicola ortygometrae ortygometrae* (Schrank), 1781. *Crex crex* (Linnaeus), Cornerake.

*Rallicola ortygometrae subporzanae* n. ssp. *Porzana carolina* (Linnaeus), Sora rail.

*Rallicola porzanae* (Piaget), 1880. *Coturnicops noveboracensis noveboracensis* (Gmelin), Yellow rail.

The black rails, *Laticrallus jamaicensis* subspecies, are the only hosts from this area likely to harbor a form of *Rallicola* that have not been examined to date.

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